



Integrating predictive information into an agro-economic model to guide agricultural planning

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Seasonal climate forecasts can inform long-range planning, including water resources utilization and allocation, however quantifying the value of this information on the economy is often challenging. For rain-fed farmers, skillful season-ahead predictions may lead to superior planning, as compared to business as usual strategies, resulting in additional benefits or reduced losses. In this study, regional-level probabilistic precipitation forecasts of the major rainy season in Ethiopia are fed into an agro-economic model, adapted from the International Food Policy Research Institute, to evaluate economic outcomes (GDP, poverty rates, etc.) as compared with a no-forecast approach. Based on forecasted conditions, farmers can select various actions: adjusting crop area and crop type, purchasing drought resistant seed, or applying additional fertilizer. Preliminary results favor the forecast-based approach, particularly through crop area reallocation.